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OFFICE OF THE STAFF JUDGE ADVOCATE  
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EXAMINER
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PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* GREGORY S. FRANCIS, CLARENCE E. RASH, and  
MATTHEW J. REARDON

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Appeal 2009-004264  
Application 09/910,669  
Technology Center 2100

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Decided: March 19, 2010

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*Before* LEE E. BARRETT, HOWARD B. BLANKENSHIP, and  
THU A. DANG, *Administrative Patent Judges*.

DANG, *Administrative Patent Judge*.

DECISION ON APPEAL

## I. STATEMENT OF CASE

Appellants appeal the Examiner's non-final rejections of claims 1-8, 10-17, and 19-28 under 35 U.S.C. § 134(a). Claims 9 and 18 are objected to. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

### A. INVENTION

According to Appellants, the invention relates to a "method and related system which allow for automated assignment of button labels across one or more displayed pages in response to input quantitatively specifying design constraints and tradeoffs" (Spec. 4, ll. 32-35).

### B. ILLUSTRATIVE CLAIM

Claim 1 is exemplary and reproduced below:

1. A method comprising:

accepting user input specifying a geometrical arrangement of two or more buttons on one or more displayed pages;

accepting user input labeling at least two of the two or more buttons on the one or more displayed pages;

accepting user input defining at least one interaction between the labeled at least two buttons;

accepting user input specifying at least one constraint cost for the defined at least one interaction;

calculating at least one constraint cost value corresponding, respectively, to the at least one constraint cost; and

automatically assigning the labels of the at least two buttons among the two or more buttons on one or more displayed pages such that the at least one constraint cost is substantially optimized and the at least one constraint cost value is indicative of a relative optimization of the at least one constraint cost.

### C. REJECTIONS

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Lynch	US 5,835,693	Nov. 10, 1998
Ikemoto	US 5,969,717	Oct. 19, 1999
Wagner	US 6,002, 395	Dec. 14, 1999

Claims 1-5, 8, 10-14, 17, 19-23, 26, and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wagner and Lynch.

Claims 6, 7, 15, 16, 24, and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wagner, Lynch, and Ikemoto.

A rejection of claims 19-27 under 35 U.S.C. § 101 has been withdrawn (Ans. 3).

### II. ISSUE

Has the Examiner erred in concluding that the combined teachings of Wagner and Lynch would have suggested “automatically assigning the labels of the at least two buttons among the two or more buttons on one or more displayed pages such that the at least one constraint cost is substantially optimized,” where the “at least one constraint cost” is for “at

least one interaction between the labeled at least two buttons” (claim 1), as Appellants contend?

### III. FINDINGS OF FACT

The following Findings of Fact (FF) are shown by a preponderance of the evidence.

#### *Wagner*

- 1) Wagner discloses a builder tool for creating and modifying a graphical user interface (“GUI”), such as a point-of-sale touch screen interface (col. 2, ll. 9-15).
- 2) Wagner’s Fig. 2A illustrates a restaurant POS touch screen created by the builder tool (col. 3, ll. 45-52; col. 4, ll. 27-29; Fig. 2A).
- 3) Related buttons are placed in the same screen unit; e.g., the “PIZZA” screen unit 211 includes buttons for “PIZZAS” 211-1, “SPECIAL PEPPERONI” 211-2, “SPECIAL DELUX” 211-3, and “SPECIAL VEGGIE” 211-4 (col. 4, ll. 37-53; Fig. 2A).
- 4) When one button of a screen unit is pressed, the buttons of that screen unit may be removed from the display; e.g., buttons 221-1 to 221-8 of the “DRINKS” screen unit 202 are removed when the “BEER” button 221-8 is pressed (col. 4, ll. 54-60; Fig. 2A).

#### *Lynch*

- 5) Lynch discloses a system for “simulation and display of multi-body systems in three dimensions,” which inputs a mathematical description of each body in the multi-body system, specifies a force to act on one of the bodies, solves kinematics constraints of the system, and displays a result of the solution (col. 1, ll. 8-9; Abstract).

*Ikemoto*

6) Ikemoto discloses a “layout processing unit” that “determines the display position of a button,” “determines the size and display position of a window,” and “makes calculations, provided that the distance between a window frame and a component is 100 pixels, and the height distance between components is 300 pixels and the width distance between components is 100 pixels” (col. 10, ll. 26-38).

IV. PRINCIPLES OF LAW

*Claim Interpretation*

The claims measure the invention. *See SRI Int'l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc). “[T]he PTO gives claims their ‘broadest reasonable interpretation.’” *In re Bigio*, 381 F.3d 1320, 1324 (Fed. Cir. 2004) (quoting *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000)). “Moreover, limitations are not to be read into the claims from the specification.” *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993) (citing *In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1989)).

*35 U.S.C. § 103(a)*

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988). In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966).

V. ANALYSIS

As to independent claim 1, Appellant argues that the parent-child

relationship of Wagner's screen units and display page buttons is not a constraint cost of an interaction between two display page buttons (App. Br. 16); and that, furthermore, the grouping of Wagner's buttons (shown in Fig. 2A) "does not suggest the optimization of two or more buttons on a plurality of displayed pages based on a defined constraint cost" (App. Br. 16-17). Appellant further argues that "Wagner is devoid of any teaching of the ranking of various cost constraints and automatically arranging similar or dissimilar button[s on] multiple screens based on rankings specified by the designer" (App. Br. 17).

The Examiner responds that "Wagner teaches the optimization of a constraint cost such as screen space via the location of labeled buttons" (Ans. 10), and cites the following two teachings as examples of constraint cost optimization: (1) "[i]n order to optimize screen space, related items such as 'PIZZAS', 'SPECIAL PEPPERONI', 'SPECIAL DELUX' and 'SPECIAL VEGGIE' would be automatically labeled and placed together under the 'PIZZA' category (*id.*); and (2) "when the 'Beer' button is pressed, only the 'Drinks' screen is automatically deleted and replaced, or labeled with new buttons" (*id.*). The Examiner also responds that claim 1 does not require an optimization of buttons on multiple pages or a ranking of constraint costs (Ans. 11).

Appellants' contentions that claim 1 requires an "optimization of two or more buttons on a plurality of displayed pages" (App. Br. 16-17) and a "ranking" of constraint costs (App. Br. 17) are not commensurate in scope with the language of claim 1. That is, claim 1 does not recite any such optimization of buttons on multiple pages or such "ranking" as argued. Accordingly, we will not read any such limitations into claim 1.

Thus, an issue we address is whether the Examiner erred in finding that the combined teachings of Wagner and Lynch would have suggested “automatically assigning the labels of the at least two buttons among the two or more buttons on one or more displayed pages such that the at least one constraint cost is substantially optimized,” where the “at least one constraint cost” is for “at least one interaction between the labeled at least two buttons” (claim 1), as Appellants contend.

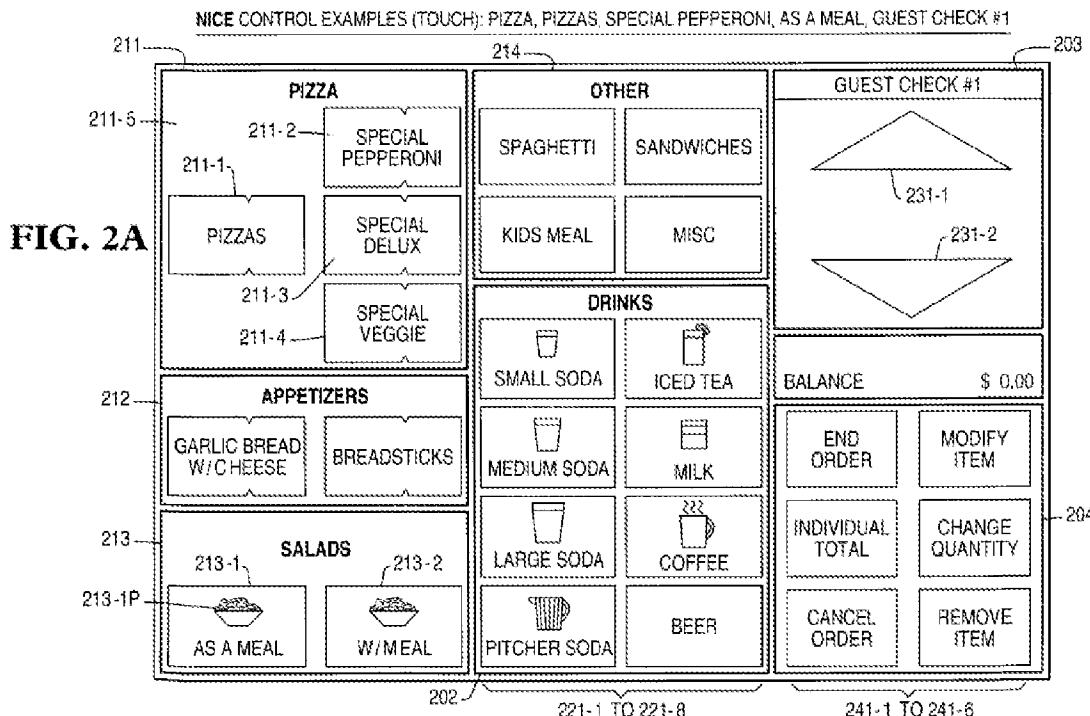
We begin our analysis by giving the claims their broadest reasonable interpretation. *See In re Bigio*, 381 F.3d at 1324. Furthermore, our analysis will not read limitations into the claims from the Specification. *See In re Van Geuns*, 988 F.2d at 1184.

We note some difficulty in reconciling the limitations “accepting user input labeling at least two of the two or more buttons” and “automatically assigning the labels of the at least two buttons among the two or more buttons” (claim 1). In particular, despite consulting the Appeal Brief’s “Summary of the Invention,” we could not discern how a button can be both labeled by user input and automatically assigned the same label. We interpret these limitations to collectively mean that labels are selected by user input for assignment.

In turn, we interpret the limitation at issue as requiring an automatic assignment of two selected labels to two display page buttons, respectively, such that a cost constraint of an interaction between the two buttons is optimized. Consistent with Appellants’ Specification, we interpret “interaction” as meaning a relationship between two buttons, as defined by “how difficult it is for a user to go from one button to another” (Spec. 24, 27-28).

Wagner discloses a builder tool for creating the GUI of a point-of-sale touch screen (FF 1), such as the touch screen illustrated by Wagner's Fig. 2A (FF 2) and reproduced below.

Wagner's Fig. 2A



After reviewing the record on appeal, we agree with the Appellants that the parent-child relationship of Wagner's screen units and display page buttons is not a constraint cost of an interaction between two display page buttons. In particular, though the Examiner finds that Wagner's builder tool places related buttons (e.g., for "PIZZAS" 211-1, "SPECIAL PEPPERONI" 211-2, "SPECIAL DELUX" 211-3, and "SPECIAL VEGGIE" 211-4) in the same screen unit (e.g., "PIZZA" 211) (FF 3), we agree with Appellants that there is no teaching in the portions of Wagner cited by the Examiner that such placement optimizes a cost constraint of an interaction between two buttons. In fact, there is no teaching in the cited portions that such buttons

even have an “interaction,” i.e., a relationship that can be defined by “how difficult it is for a user to go from one button to another” (Spec. ¶ [0121]). Rather, it appears that one button, e.g., “SPECIAL PEPPERONI” 211-2, would be selected at the exclusion of another related button, e.g., “SPECIAL DELUX” 211-3.

Similarly, though the Examiner finds that Wagner’s builder tool removes the related buttons of a screen unit when one of the buttons is pressed (e.g., buttons 221-1 to 221-8 of the “DRINKS” screen unit 202 are removed when the “BEER” button 221-8 is pressed) (Ans. 10), there is no teaching in the cited portions that the deletion of such related buttons optimizes a cost constraint of an interaction between two of those buttons. That is, we find that the portions cited by the Examiner do not show an “interaction” of two buttons and, in turn, how a cost constraint of that interaction is optimized.

The Examiner relies on Lynch as teaching the use of “constraint cost values,” i.e., as merely showing that the use of “numerical values to represent costs in optimization is commonplace” (Ans. 13). Lynch discloses a system for “simulation and display of multi-body systems in three dimensions” (FF 5). As Lynch’s cited teachings do not address a constraint cost of “interactions” between display page buttons, we find that it does not cure the rejection’s deficient application of Wagner.

For the above reasons, we agree with Appellants that the cited teachings of Wagner and Lynch would not have suggested an automatic assignment of two selected labels to two display page buttons, respectively, such that a cost constraint of an interaction between the two buttons is optimized. Accordingly, we conclude that the Examiner erred in concluding

that the combined teachings of Wagner and Lynch would have suggested the limitations of claim 1. As the Examiner presents the same findings with respect to independent claims 1, 10, 19, and 28 (Ans. 3), we reverse the rejection of claims 1, 10, 19, and 28, and their respective dependent claims 2-5, 8, 11-14, 17, 20-23, and 26, under 35 U.S.C. § 103(a) as being unpatentable over Wagner and Lynch.

As to claims 6, 7, 15, 16, 24, and 25, the Examiner relies on Ikemoto as teaching a “constraint cost for the interaction of components including a pages-to-far buttons cost and a parent-child variability cost” (Ans. 8). The cited disclosure of Ikemoto teaches a layout processing unit that sets distances between a window frame and its components (FF 6). As Ikemoto’s cited teachings do not address a constraint cost of “interactions” between display page buttons, we find that it does not cure the rejection’s deficient application of Wagner. As such, we reverse the rejection of claims 6, 7, 15, 16, 24, and 25 under 35 U.S.C. § 103(a) as being unpatentable over Wagner, Lynch, and Ikemoto.

## VI. CONCLUSIONS

The Examiner has erred in finding that claims 1-5, 8, 10-14, 17, 19-23, 26, and 28 are unpatentable over Wagner and Lynch.

The Examiner has erred in finding that claims 6, 7, 15, 16, 24, and 25 are unpatentable over Wagner, Lynch, and Ikemoto.

## VII. DECISION

The rejections of claims 1-8, 10-17, and 19-28 under 35 U.S.C. § 103(a) are reversed.

Appeal 2009-004264  
Application 09/910,669

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

**REVERSED**

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